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OZONE PRODUCTION IN THE NEW YORK CITY URBAN PLUME

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As part of NARSTO NE, Brookhaven National Laboratory conducted an aircraft based field campaign with the overall objective of obtaining a mechanistic understanding of O₃ formation in the NY City urban plume. This experiment took place during July 1996, using the DOE G-1 aircraft as the measurement platform. Participants in this experiment included scientists from Argonne National Laboratory, Battelle Columbus, EML, and Pacific Northwest Laboratory. Measurements included, O₃, NO, NO₂, NO_y, PAN, HNO₃, VOC's, CO, H₂O₂, organic peroxides, HCHO, radon, SO₂, aerosol parameters, actinic flux, and meteorological variables. A typical flight involved traverses and vertical profiles upwind and downwind of NYC. Flights were conducted during hours of peak O₃ production under meteorological conditions conducive to a high O₃ (i.e., SW flow) as well as under conditions that are not conducive. We present here an overview of this data including model calculations of O₃ production rates.